

AMENDMENTS TO THE SPECIFICATION

Please add the following new paragraph after the title ending on line 2 of page 1:

-- This application claims the benefit of the filing date as provided in 35 U.S.C. 119 of European patent application number 02293038.2 filed on December 9, 2002, the disclosures of which are incorporated herein by reference. --

Please replace the paragraph beginning at page 1, line 3, with the following rewritten paragraph:

-- Field of the Invention

The present invention relates to a method for optimising the distribution of service instances for providing a service from a source to a plurality of clients in a network.

Background of the Invention

A service instance is an entity that can provide a service to a client. In the case of Internet services, the service instance is for example a proxy server; in the case of information services, the service instance is for example a database; in the case of logistics, the service instance can be a transfer station. In a telecommunications network, the "clients" may be for example access networks or access nodes or user terminals. --

Please add the following new title after the paragraph ending on line 27 of page 1.

-- Summary of the Invention --

Please replace the paragraph beginning at page 2, line 11, with the following rewritten paragraph:

-- Thus, ~~thanks to the present invention~~, the minimum number of service instances necessary to provide the service to the clients in a network as well as the corresponding locations of these service instances can be determined. --

Please replace the paragraph beginning at page 3, line 21, with the following rewritten paragraph:

-- Brief Description of the Drawings

~~The description refers to the accompanying drawings, in which:~~

- Figure 1 illustrates schematically a network wherein two intersecting sets of sub-networks for providing a service respectively from a server to two clients are identified, wherein the sets of sub-networks contain those sub-networks that can provide the service with adequate service quality;
- Figure 2 illustrates schematically the complexity of the service distribution topology in the case of a higher number of clients;
- Figure 3 shows an example of a service distribution tree;
- Figures 4a, 4b, 4c, 4d are flow diagrams showing successive steps of an optimisation method in accordance with the present invention, in various embodiments wherein the network is modelled by means of a tree-based topology;
- Figure 5 is a flow diagram showing successive steps of an optimisation method in accordance with the present invention, in another embodiment wherein the network is modelled by means of a meshed topology;
- Figure 6 is a non-limiting example of a table illustrating the analysis carried out for a vertex in the graph modelling the network, in the course of the optimisation method according to the invention in a particular embodiment; and
- Figure 7 illustrates schematically a device according to the present invention, in a particular embodiment. --

Please add the following new title after the paragraph ending on line 8 of page 4.

-- Detailed Description of the Drawings --

Please replace the Abstract, with the following rewritten Abstract:

-- This method for determining locations of service instances for optimising distribution of a service in a network, from a source to a plurality of clients each having predetermined requirements, wherein the network can be modelled by means of a

graph, comprises steps of: placing (40) a service instance in each leaf in the graph; and, starting from the leaves, for each service instance: checking (42) whether the service instance when placed in a vertex on the next higher level can fulfil the requirements of all clients to be served by said service instance; and moving (43) or not the service instance one level higher, depending on the result of the checking step (42).

Application to Point-To-Multipoint (PTM) service distribution in telecommunications networks of the WAN (Wide Area Network) type.

Figure 4d. --